A Monthly Bulletin on Epidemiology & Public Health Practice in Washington State

# epiTRENDS

Vol. 1 No. 1

In This Issue:



## Welcome to the Epidemiology Bulletin

With this inaugural issue, we proudly introduce a new direction and format for the distribution of public health information in Washington State – our monthly epidemiology and public health practice bulletin, epiTRENDS. Our goal is to provide timely information needed to better understand public health problems in Washington, to manage public health programs, and to provide health care for our state's 5.5 million residents.

Each issue of epiTRENDS will present feature articles, brief reports, and monthly summaries of current surveillance data for selected reportable diseases. We hope that the scope of information along with analysis and interpretation will be useful in guiding public health actions and in the clinical management of individual patients.

Accordingly, the bulletin's audience encompasses a wide range of medical and public health professionals including staff in all local health departments and districts, primary care providers throughout the state, private and public health laboratories, and professionals in other state and federal agencies. Future issues of epiTRENDS also will be available through the Washington State Department of Health's World Wide Web home page.

An important goal of the bulletin is to enhance our ability to respond to and support our constituents' needs. We welcome comments from our readers and also encourage the submission of articles, case reports, and investigation summaries relating to disease surveillance and control activities.

We look forward to working as partners with you in the effort to improve the effectiveness of disease prevention and health promotion programs in Washington.

Paul Stehr-Green, DrPH, MPH, FACE
State Epidemiologist

## Meningococcal Disease: Rare, but Rates Are Rising

Meningococcal disease, infection of the blood or spinal fluid with *Neisseria meningitidis*, can be a devastating illness. Even with modern medical treatment, about 10% of cases are fatal. Mortality is higher for fulminating disease, which can progress to irreversible shock within hours.

Although up to a quarter of the population may be carrying *N. meningitidis* in the nose or pharynx, clinical disease is sporadic and rare. Public health intervention is generally limited to providing close contacts of the case with an antibiotic such as rifampin for prophylaxis.

An outbreak, however, can become a dreaded public health event. In certain situations, mass vaccination may be appropriate. Such an event occurred in eastern Washington in 1989, with extensive media attention.

In 1993, rates of group B meningococcal disease began to increase in several southern Washington counties and in Oregon. The upward trend continued in 1994, with Clark and Cowlitz counties reaching disease rates of around 8 cases per 100,000 population, four times the rate in the remainder of the state. The rates leveled off in Clark and Cowlitz counties last year, but the 1995 statewide rate, 2.3 per 100,000, was the highest reported in recent decades (figure).

Early in 1995 five confirmed and one

Continued page 2

1.96

# Meningococcal(from page 1)

probable case of meningococcal disease occurred among the 900 students in a Seattle middle school. Antibiotic prophylaxis was offered to all students and staff. The increased county rates and the school outbreak were both due to a specific clone of group B *N. meningitidis*.

An epidemic of group B meningococcal disease was identified in Norway in 1974. A specific laboratory method, multilocus enzyme electrophoresis (sidebar), identified a group B strain known as ET-5. Retrospective investigation determined it had first occurred in 1969. ET-5 became continuously present, accounting for 80% of clinical isolates in Norway. By 1984 the incidence of meningococcal disease there was 7.4 per 100,000.

The ET-5 complex is a *N. meningitidis* group B strain associated with hyperendemic meningococcal disease. It has been found in the Faroe Islands, Finland, Scotland, Spain, Cuba, Chile, and Brazil. Oregon and Washington reported the first sustained occurrence in the United States. The ET-5 strain appears to produce more cases of severe disease and to occur in older age groups than do other group B strains.

With the assistance of Centers for Disease Control and Prevention, the State Department of Health is continuing to study meningococcal disease in Washington. A case-control study showed an increased risk for adult smokers and for children living in households with adult smokers.

Clinical laboratories are required to submit meningococcal subcultures to the State Public Health Laboratories. Confirmed and suspect cases should be reported to the local health department or district (see the county government section of your local telephone directory).

### Multilocus Enzyme Electrophoresis

In this laboratory method to compare *N. meningitidis* isolates, a set of metabolic enzymes (e.g., dehydrogenases, peptidases) is selected, each of which has several forms. Electrophoresis type (ET) is obtained for the enzymes from each *N. meningitidis* isolate. Although the results will vary by the selection of enzymes and isolates, uniform designation is retained for the ET-5 complex named in early work.

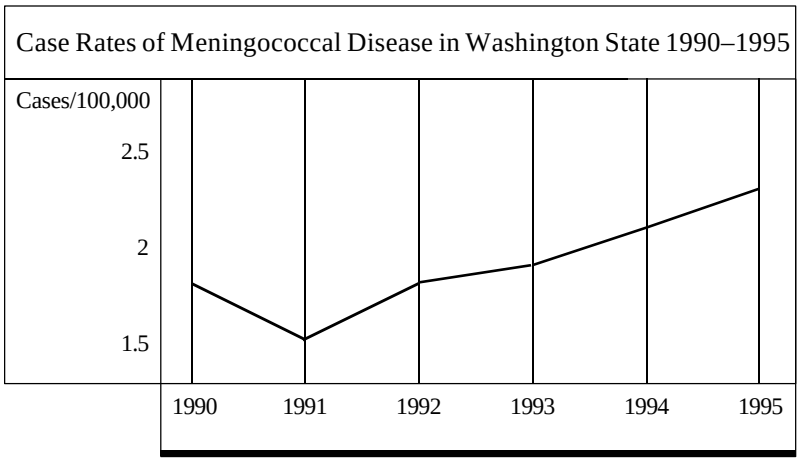


Figure 1: Reported cases of meningococcal disease in Washington State show that the case rate has been increasing steadily since 1991.

# Clark County Experiences Measles Epidemic

From March 1 to June 2, 1996, 33 cases of measles* were identified in Clark County in southwest Washington. The first reported case had onset of rash on April 21. However, investigation of this and subsequent cases identified the source case as a high school foreign exchange student who was hospitalized with undiagnosed rash and pneumonia in mid-March.

The 33 case-patients ranged from 5 months to 45 years of age; 19 (58%) of the cases were older than 20 years; six (18%) were 16–20 years, and eight (24%) were children under two years of age. Eight cases (24%) were health care workers; transmission in medical settings accounted for 13 (39%) of the cases.

During the Clark County epidemic, five additional measles cases were reported in Washington State (one from King County and four from Cowlitz County), and four were reported from Oregon. Only one of these cases (a health care worker from Multinomah county, Oregon) was epidemiologically linked to the Clark County epidemic. No additional cases have been reported in Clark County since June 2.

From this experience local and state public health officials have identified several issues that need further attention including

Continued page 4

*The clinical case definition for measles is: (1) a generalized rash lasting ž 3 days, (2) a temperature ž 101°F, AND (3) cough, or coryza, or conjunctivitis. All 33 cases met the clinical case definition; 25 were also laboratory confirmed, and six were epidemiologically linked to laboratory-confirmed cases.

# Monthly Surveillance Data by County

June 1996* – Washington State Department of Health

| County | Campylobacter | Giardia | Hepatitis A | Hepatitis B | E. coli O157:H7 | Salmonella | Shigella | Meningococcal Disease | Tuberculosis | AIDS† | Gonorrhea | Syphilis | Pesticides** | Lead*** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adams | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0/0 |
| Asotin | 1 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0/0 |
| Benton | 1 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0/1 |
| Chelan | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 2 | 4/5 |
| Clallam | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0/0 |
| Clark | 8 | 8 | 4 | 1 | 0 | 4 | 0 | 1 | 0 | 0 | 6 | 0 | 1 | 0/0 |
| Columbia | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0/0 |
| Cowlitz | 0 | 0 | 11 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1/4 |
| Douglas | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0/0 |
| Ferry | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0/0 |
| Franklin | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0/0 |
| Garfield | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0/0 |
| Grant | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 6 | 1/1 |
| Grays Harbor | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0/0 |
| Island | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0/0 |
| Jefferson | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0/0 |
| King | 31 | 18 | 2 | 3 | 0 | 16 | 3 | 4 | 7 | 28 | 71 | 6 | 8 | 1/29 |
| Kitsap | 3 | 1 | 7 | 0 | 0 | 4 | 0 | 1 | 1 | 0 | 11 | 1 | 0 | 0/17 |
| Kittitas | 1 | 1 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0/0 |
| Klickitat | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0/0 |
| Lewis | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0/0 |
| Lincoln | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0/0 |
| Mason | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0/0 |
| Okanogan | 1 | 0 | 0 | 0 | 1 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 2 | 0/0 |
| Pacific | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0/0 |
| Pend Oreille | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0/0 |
| Pierce | 7 | 2 | 7 | 0 | 2 | 9 | 1 | 0 | 1 | 0 | 12 | 1 | 0 | 0/137 |
| San Juan | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0/0 |
| Skagit | 4 | 0 | 2 | 1 | 1 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0/2 |
| Skamania | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0/0 |
| Snohomish | 11 | 5 | 0 | 1 | 0 | 6 | 1 | 0 | 1 | 0 | 10 | 1 | 5 | 0/1 |
| Spokane | 8 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 2 | 0 | 9 | 0 | 2 | 0/1 |
| Stevens | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0/0 |
| Thurston | 3 | 3 | 1 | 0 | 2 | 2 | 0 | 1 | 0 | 0 | 3 | 0 | 0 | 0/4 |
| Wahkiakum | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0/0 |
| Walla Walla | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 2 | 0/3 |
| Whatcom | 10 | 0 | 1 | 0 | 0 | 5 | 0 | 0 | 1 | 0 | 1 | 0 | 4 | 2/8 |
| Whitman | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0/0 |
| Yakima | 5 | 4 | 0 | 0 | 0 | 8 | 2 | 0 | 2 | 0 | 4 | 0 | 13 | 2/126 |
| Unknown | | | | | | | | | | | | | 3 | 0/1 |
| Current Month | 107 | 49 | 46 | 7 | 6 | 63 | 14 | 8 | 29 | 28 | 133 | 12 | 57 | 11/346 |
| June 1995 | 101 | 50 | 112 | 17 | 11 | 55 | 37 | 4 | 22 | 80 | 221 | 14 | 0 | 21/311 |
| 1996 to date | 412 | 224 | 282 | 53 | 18 | 271 | 107 | 54 | 114 | 334 | 1098 | 71 | 087/2301§ | |
| 1995 to date | 377 | 304 | 359 | 89 | 38 | 232 | 170 | 58 | 110 | 522 | 1271 | 92 | 074/1869 | |

* Data are provisional based on reports received as of June 30, unless otherwise noted.
† Cases reported in June 1996 represent only King County; cases from other counties will be recorded in July.
** Unconfirmed reports of illness associated with pesticide exposure; data are for May 1996.
*** Number of elevated tests / total tests performed (not number of children tested); number of tests per county indicate county of health care provider, not county of residence for children tested.
§ More than 500 previously missing laboratory reports were entered onto registry during May 1996.

# Q&A

**Q:** *How can I obtain answers to questions about epidemiologic or public health issues?*

**A:** Contact*epi*TRENDS, the Washington epidemiology bulletin, through regular mail or email. Questions of general interest, and answers, will be included in future issues.

Epidemiology
Washington State
Department of Health
1610 NE 150th Street
Seattle, WA 98155

**email:**
function@u.washington.edu

## Two Cases of Hantavirus Reported Since April

Seven cases of hantavirus infection have been confirmed in Washington since 1985 including four in 1995 and one in 1996. The most recent case occurred in April in Snohomish County. A possible, but not yet confirmed case, occurred in June in Lewis County. This rare infection involves pulmonary failure with 50% mortality. The virus is carried by deer mice, which are common in rural areas of the western United States. Most cases occurred after exposure to rodents around the home. Recommended precautions to avoid rodent exposure include: eliminate rodents from the house, prevent rodent access to the house, and remove food, trash, and brush from around the house.

## Measles (from page 2)

misdiagnosis of measles, delay in reporting to the local health district, and immune status among health care workers, exchange students, and community college attendees. Measles may be reintroduced into Washington State at any time. For this reason, all medical providers are encouraged to be alert for of signs and symptoms of measles, to isolate potential measles patients from their waiting rooms, and to promptly report any cases of rash illness to the local health department.

## World Wide WEB Access Tips

The World Wide Web is expanding rapidly as a source of information on public health and epidemiology. Explore the home page of the Washington State Department of Health for reports on recent health-related events, information about agency divisions and programs, and links to related web sites. The address is: www.doh.wa.gov

## Meetings & Courses

Aug 11-14 — 51st Annual International Northwestern Conference on Diseases in Nature Communicable to Man; Seattle, WA. For information: Beth Wieman, Tel: 206-361-2873; Fax: 206-361-2932.

Sep 30-Oct 2 — *Building Partnerships for Health* — Third Annual Washington State Joint Conference on Health, sponsored by the Washington State Public Health Association; Tacoma, WA. For information: George Hilton, Tel: 206-361-2891; Fax: 206-361-1111; email: gbh0303@hub.doh.wa.gov

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